

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A method for manufacturing an optical article comprising the steps of:

- a) providing a substrate tube;
- b) forming one or more cladding layers inside the substrate tube, the one or more cladding layers including an innermost cladding layer;
- c) forming a concentric fluorine reservoir adjacent to the innermost cladding layer; and
- d) forming a core adjacent to the fluorine reservoir and concentric with [[the]] one or more outer cladding layers, wherein the core comprises silica and an active rare earth dopant;
- e) wherein the fluorine concentration in the fluorine reservoir is higher than the fluorine concentration in either the core or the innermost cladding layer.

Claim 2. (Original) The method of claim 1, wherein the fluorine concentration in the fluorine reservoir is at least 30% higher than the fluorine concentration in either the core or the innermost cladding layer.

Claim 3. (Original) The method of claim 1, wherein the fluorine concentration in the fluorine reservoir is at least 50% higher than the fluorine concentration in either the core or the innermost cladding layer.

Claim 4. (Original) The method of claim 1 wherein the fluorine concentration in the fluorine reservoir is at least 100% higher than the fluorine concentration in either the core or the innermost cladding layer.

Claim 5. (Currently Amended) The method of claim 1, wherein the steps of forming include the step of applying one or more of the following methods: MCVD, sol-gel doping, coating, and PCVD.

Claim 6. (Original) The method of claim 1, further comprising the step of placing a diffusion barrier layer in the cladding layer.

Claim 7. (Original) The method of claim 1, further comprising the step of placing a diffusion barrier layer in the core.

Claim 8. (Original) The method of claim 1, wherein the fluorine concentration in the fluorine reservoir is between 0.7 and 4.0 mol%.

Claim 9. (Cancelled)

Claim 10. (Currently Amended) The method of claim 1, wherein the core comprises a halide-doped silicate glass that comprises approximately the following in cation-plus-halide mole ~~percent~~85-99 percent: 85-99 mol% SiO₂, 0.25-5 mol% Al₂O₃, 0.05-1.5 mol% La₂O₃, 0.0005-0.75 mol% Er₂O₃, 0.5-6 mol% F, 0-1 mol% Cl.

Claim 11. (Currently Amended) The method of claim 1, wherein the core comprises a halide-doped silicate glass that comprises approximately the following in cation-plus-halide mole ~~percent~~percent: 93-98 mol% SiO₂, ~~1.5-3.5~~ 1.5-3.5 mol% Al₂O₃, 0.25-1.0 mol% La₂O₃, 0.0005-0.075 mol% Er₂O₃, 0.5-2 mol% F, 0-0.5 mol% Cl.

Claim 12. (Original) The method of claim 1, the core further comprising fluorine.

Claim 13. (Original) The method of claim 1, wherein the fluorine reservoir further comprises silica and phosphorus oxide.

Claim 14. (Original) The method of claim 13, wherein the reservoir comprises phosphorus oxide and fluorine in approximately equal concentrations.

Claim 15. (Original) The method of claim 13, wherein the reservoir comprises a greater percentage of fluorine than phosphorus oxide.

Claim 16. (Original) The method of claim 1, wherein the reservoir comprises about 95.7-99.7 mol% silica, about 0.3-4 mol% fluorine and about 0-0.4 mol% phosphorus oxide.

Claim 17. (Original) The method of claim 1, wherein the innermost cladding comprises silica, fluorine and phosphorus oxide, wherein the cladding comprises at least 95 mol% silica.

Claim 18. (Currently Amended) The method of claim 1, wherein the innermost cladding comprises silica, fluorine and phosphorus oxide, wherein the innermost cladding has a refractive index matched to the refractive index of the silica substrate tube.

Claim 19. (Currently Amended) The method of claim 1, wherein the innermost cladding comprises silica, fluorine and phosphorus oxide, wherein the outermost cladding has a refractive index matched to the refractive index of the silica substrate tube, and the innermost cladding has a lower refractive index than either the outermost cladding or the silica substrate tube.

Claim 20. (Original) The method of claim 1, wherein the innermost cladding comprises silica, fluorine and phosphorus oxide, wherein the mol % of fluorine and phosphorus oxide present is approximately 0.8 and 0.7 mol% respectively.

Claim 21. (Original) The method of claim 1, wherein the innermost cladding has a refractive index that is less than that of the substrate tube, wherein the innermost cladding comprises approximately 0.3 mol% of phosphorus oxide and at least 2.0 mol % of fluorine.

Claims 22-24. (Cancelled)

Claim 25. (Original) A method for manufacturing an optical fiber comprising the steps of:

- a) providing a substrate tube;
- b) forming one or more outer cladding layers;

- c) forming a reservoir including fluorine, the reservoir being concentric with the one or more outer cladding layers and adjacent to the innermost cladding layer;
- d) forming a core adjacent to the reservoir and concentric with the one or more outer cladding layers;
- e) wherein the fluorine concentration in the reservoir is higher than the fluorine concentration in either the core or the innermost cladding; and
- f) diffusing at least a portion of the fluorine in the reservoir to form a fluorine concentration zone.

Claim 26. (Original) The method of claim 25, wherein the step of diffusing the fluorine comprises achieving a desired fluorine concentration profile by heating the reservoir.

Claim 27. (Original) The method of claim 25, wherein the step of heating comprises applying heat to the substrate tube and collapsing the tube into a preform.

Claim 28. (Original) The method of claim 26, further comprising the step of heat treating the substrate tube to diffuse the fluorine before the step of collapsing the tube.

Claim 29. (Original) The method of claim 25, further comprising the step of collapsing the substrate tube into a preform and drawing an optical fiber from the preform, wherein the step of diffusing comprises drawing the fiber.

Claim 30. (Currently Amended) The method of claim 25 wherein additional heat treatments are performed to the preform to enhance fluorine diffusion.

Claim 31. (Currently Amended) The method of claim 25 wherein additional heat treatments are performed to the fiber to enhance fluorine diffusion.

Claim 32. (Original) The method of claim 25, further comprising the step of forming a diffusion barrier layer between the cladding and the fluorine reservoir.

Claims 33-35 (Canceled)

Claim 36. (New) The method of claim 1, wherein step c) comprises forming a concentric fluorine reservoir adjacent to the innermost cladding layer, wherein a differential width of the fluorine reservoir is less than about $\frac{1}{4}$ a width of a diameter of the core.